

## CE2

**HEALTH ECONOMIC ASSESSMENT OF THE ATAC TRIAL COMPARING ANASTROZOLE VERSUS TAMOXIFEN IN ADJUVANT TREATMENT OF POSTMENOPAUSAL HORMONE RECEPTOR POSITIVE EARLY BREAST CANCER**Annemans L<sup>1</sup>, Moeremans K<sup>2</sup>, Lamarque H<sup>3</sup><sup>1</sup>Ghent University, HEDM, Meise, NA, Belgium; <sup>2</sup>HEDM, Meise, Belgium; <sup>3</sup>Astrazeneca, Rueil Malmaison, NA, France

**OBJECTIVES:** To assess the cost-effectiveness of anastrozole (Arimidex<sup>TM</sup>) as adjuvant treatment in postmenopausal hormone receptor positive (HR+), early (non-metastasised) breast cancer. **METHODS:** A Markov state transition model was developed over 20 years, simulating the natural history of postmenopausal HR+ early breast cancer. Adverse event data as well as direct rates of disease progression were obtained from the ATAC (Arimidex, Tamoxifen Alone or in Combination) trial comparing adjuvant anastrozole with tamoxifen (n = 5215), with a median follow-up duration of 4 years. Progression to subsequent health states following initial disease progression was modeled on the basis of published clinical studies. Utility scores for different disease stages were obtained from published literature. Costs of breast cancer recurrence (locoregional and distant) and adverse events were calculated from resource utilisation obtained through a two-round Delphi consensus panel (physicians = 7), multiplied with unit costs from the French health care payer's perspective at an annual discount rate of 3%. **RESULTS:** Comparison with EBCTCG data shows that the model is valid for predicting clinical outcomes. At a life time horizon of 20 years, incremental cost effectiveness ratios (ICER) of €13,525 /life year gained (LYG) and €12,722/Quality adjusted life year gained are obtained for anastrozole relative to tamoxifen. Multiple sensitivity analyses show the results to be robust to relatively large variations in risk reduction by anastrozole or cost estimates of disease progression. Outcomes appear sensitive to the time horizon with an ICER of €24,950/LYG at 15 years. This impact of time horizon on cost-effectiveness is a typical finding in treatment for early cancer, related to treatment costs incurring during the initial 5 years whereas benefits (LYG) become apparent after several years through prevention of death from disease progression. **CONCLUSION:** Compared to tamoxifen, anastrozole appears cost-effective for adjuvant treatment of postmenopausal HR+ early breast cancer and lies within acceptable cost-effectiveness benchmarks.

## CE3

**INTEGRATED ECONOMIC EVALUATION OF ENFUVIRTIDE (ENF) IN THE US USING A COMBINATION OF COST-EFFECTIVENESS ANALYSIS (CEA) AND BUDGET IMPACT ANALYSIS (BIA) TO ENHANCE HEALTH CARE DECISION-MAKING**Hornberger J<sup>1,2</sup>, Covington M<sup>3</sup>, Luo R<sup>3</sup>, Wang Z<sup>4</sup><sup>1</sup>Stanford University School of Medicine, Stanford, CA; <sup>2</sup>Acumen, LLC, Burlingame, CA, USA; <sup>3</sup>Roche Laboratories Inc, Nutley, NJ, USA; <sup>4</sup>School of Pharmacy, University of Illinois at Chicago, Chicago, IL, USA

**OBJECTIVES:** ENF blocks fusion of HIV-1 to host cells. Phase III trials, TORO 1 & 2, demonstrated that ENF in combination with optimized backgrounds (OB) provided additional viral suppression and immune reconstitution compared to OB alone in antiretroviral experienced patients. We constructed two interactive models to evaluate cost-effectiveness and budgetary impact of ENF. **METHODS:** Treatment effects on time to virological failure, 24-week change from baseline in HIV-1 viral load and CD4+ cell count were from clinical findings. Time to immunological failure (IF), AIDS-defining event (ADE), and death were estimated by linking data mathematically to published disease-progression models. Direct costs were calculated from published estimates. The incremental cost per quality-adjusted life year (QALY) gained (ICER) was estimated using the societal perspective. The BIA estimated financial impact of adding ENF to formularies across total health care costs versus pharmacy costs only. Total costs of treating eligible HIV population for four years and cost per member per month (PMPM) were calculated for a hypothetical health plan. Most input variables can be changed to reflect plan characteristics and patient experiences. **RESULTS:** Treatment effects of ENF + OB vs. OB alone indicate a decline in the annual rate of IF from 73% on OB to 37% on ENF + OB. The combined treatment effects are predicted to increase mean survival by 1.6 years (1.3 QALYs). The ICER of ENF + OB is estimated to be \$36,238/QALY. BIA showed added costs of \$5,074,472 (\$1.69 PMPM) for ENF treatment in the first year, and \$1,222,279 (\$0.28 PMPM) annually in subsequent years. Sensitivity analyses showed that ADE risk as a function of CD4, time to IF, and baseline CD4+ cell count most affected cost-effectiveness estimates. **CONCLUSIONS:** Combining drug plan benefits with CEA enables a more comprehensive understanding of the economic implications of ENF. The transparent and interactive models allow Health care decision-makers to understand and utilize them to estimate ENF's cost-effectiveness and budgetary impact easily.